

ABSTRACT OF THE DISCLOSURE

The present invention provides a data processing apparatus and method for computing an absolute difference between portions of first and second data elements.

- 5 The data processing apparatus comprises processing logic operable to perform a data processing operation on first and second data elements, the processing logic comprising comparison logic operable to compare at least a part of the first and second data elements in order to determine which of the first and second data elements is a larger data element. The comparison logic is operable to produce a comparison result which has a first value
- 10 if the first data element is the larger data element and a second value if the second data element is the larger data element. The processing logic further comprises absolute difference logic operable to compute an absolute difference between a portion of the first data element and a portion of the second data element. The absolute difference logic comprises adder logic operable to invert one of the portions to produce an inverted data
- 15 element portion, and to add the inverted data element portion to the other of the portions and to the comparison result received from the comparison logic in order to produce an intermediate result. Further, the absolute difference logic comprises output logic operable to generate an inverted version of the intermediate result and to output as the absolute difference either the intermediate result or the inverted version of the
- 20 intermediate result dependent on the comparison result. Through use of the present invention, an absolute difference can be computed without the need to provide logic to swap the ordering of the first and second data element portions prior to the addition dependent on the result of the comparison. Accordingly, a significant improvement in speed of determination of the absolute difference can be realised.